also calculated. All costs were inflated to 2010 US$. **RESULTS:** Data were available for 900 employees (HCV-Tx=216;HCV-noTx=684). The cohorts differed in salaries, the %married, %white, and %exempt. Mean HCV-noTx cohort IN ($836,P=0.0001) and OUT ($488,P=0.0018) costs were higher, and HCV-Tx MD ($564, P<0.0001), LAB ($42,P<0.0001) and Rx ($21,420,P<0.0001) costs were higher. The HCV-noTx cohort had more IN services (1.83, P=0.0021), while the HCV-Tx cohort had more MD (15.48,P<0.0001), LAB (3.31,P<0.0001) and Rx (12.0,P<0.0001) services. Overall, HCV-Tx direct medical costs were $3556 (services=54.40) which were lower than the HCV-noTx ($4234;services=35.39). The HCV-Tx cohort had 27.84 Rxs ($22,726) vs the HCV-noTx cohort's 15.84 Rxs ($1408). **CONCLUSIONS:** Higher costs associated with HCV Treatment in the MD office offset IN and OUT costs.

PGI10

EXAMINATION OF RESOURCE UTILIZATION PATTERNS ACROSS SUBGROUPS OF GASTROESOPHAGEAL REFLUX DISEASE PATIENTS

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**OBJECTIVES:** To determine if subsets of gastroesophageal reflux disease (GERD) patients vary with respect to healthcare utilization. **METHODS:** This retrospective analysis identified commercial enrollees 18-75 years old with claims for GERD (ICD-9-CM: 530.81 or 530.11) and proton pump inhibitors (PPI) during 01/01/05 – 06/30/09. Patients were further required to have no claims for HIV, pregnancy, inflammatory bowel disease or cancer at any time, or GERD prescription or gastric/duodenal ulcer prior to initial GERD diagnosis. Eligible patients were then stratified based on medical claims for other symptoms during a 12 month period centered on their first GERD diagnosis: Stage A (GERD diagnosis, no other symptoms); Stage B (GERD + respiratory symptoms); Stage C (GERD + Barrett's esophagus); Stage D (GERD + esophageal stricture); Stage E (GERD + iron deficiency anemia or acute hemorrhage). The stages were compared with respect to GERD treatment, other gastrointestinal symptoms and GERD-related or all-cause costs for outpatient, inpatient, and pharmacy care during the first six months after initial diagnosis using univariate statistics. **RESULTS:** 174,597 patients were analyzed: Stage A: 74%, Stage B: 20%, Stage C: 1%, Stage D: 2%, Stage E: 3%. Versus stages A and B, patients in Stages C-E were more likely to visit a gastroenterologist (53.9% vs. 12.9%), receive multiple PPI (11.5% vs. 7.4%) and had higher rates of gastritis/duodenitis (17.0% vs. 5.9%), esophageal ulcers (4.4% vs. 0.3%), and esophageal surgery (7.6% vs. 0.3%). Six month GERD-related costs ranged from $615/patient (Stage A) to $1,714/patient (Stage D); all-cause costs ranged from $4,195/patient (Stage A) to $11,340/patient (Stage E) (p<0.0001 for all contrasts). **CONCLUSIONS:** While GERD patients with additional complications represented a relatively small portion of the total sample, their significantly higher costs and events suggest an opportunity for improving patient care.

PGI11

THE ECONOMIC AND QUALITY OF LIFE BURDEN OF ILLNESS IN CHRONIC CONSTIPATION (CC) AND IRRITABLE BOWEL SYNDROME (IBS): A SYSTEMATIC REVIEW

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**OBJECTIVES:** To systematically review literature on the burden of illness in patients with CC and IBS subtypes. **METHODS:** Medline, Medline In-process, EconLit, CINAHL, Cochrane Library, and AGA abstracts were searched. Studies reporting economic and quality of life (QOL) outcomes in IBS or CC patients were included. Study designs included case control, observational studies, surveys, and retrospective analyses. RCT and studies reporting outcomes attributable to a specific therapy were excluded. **RESULTS:** 882 unique studies were identified and 35 selected: 16 evaluated economic measures only, 16 humanistic measures only, and 3 economic and humanistic measures. Studies were excluded if patient populations or outcomes were not relevant. Selected studies included a total of 63,816 patients: 1,706 IBS-C, 2,264 IBS-D, 2,892 IBS-A, 15,830 IBS sub-type unspecified, and 1,278 CC patients. Nineteen studies assessed economic measures: 11 evaluated direct costs, 1 indirect costs, and 7 direct and indirect costs. Indirect costs generally reflected estimated work productivity loss due to IBS symptoms or healthcare-seeking behavior. US-based estimates of direct costs per IBS patient were $1,562/year (2002 USD) to $7,547/year (year NR, published in 2000); direct costs per CC patient were $1,912/year (2002 USD) to $7,522/year (2002-2003 USD). Indirect per IBS patient costs ranged from $791/year (1998 USD) to $7,737/year (year NR, published 2005). No study assessed costs associated with IBS-C/D/A subtypes. In studies comparing IBS patients to non-IBS controls, IBS patients had significantly lower SF-36 domain scores, notably in vitality, general health, and physical functioning. **CONCLUSIONS:** Our research identified a range of methods and estimates of the burden of IBS and CC. No economic study reported recent cost estimates by IBS subtypes; only two estimated direct costs of CC. No studies presented QOL information in CC patients; however, patients suffering from IBS had measurable burden of disease based on QOL scores.

PGI12

DOSE VARIATIONS WITH ADALIMUMAB AND INFLIXIMAB IN THE TREATMENT OF CROHN'S DISEASE: A CANADIAN ASSESSMENT

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**OBJECTIVES:** In Canada, adalimumab and infliximab are approved for the treatment of moderate to severe active Crohn's disease (CD). Product monographs suggest that the dose may be increased in case of incomplete response. The objective of this study was to analyze, in a real world setting, dose variations in CD patients who initiated adalimumab or infliximab treatment. **METHODS:** A retrospective cohort study was conducted using data from the Regie de l'assurance maladie du Quebec (RAMQ) for a random sample of patients with a CD diagnosis, who had initiated adalimumab or infliximab between February 2008 and December 2008. For adalimumab, dose increase was considered when the dose received exceeded 40mg every other week over at least an 8-week period. For infliximab, dose increase was considered either when the dose was increased or interval between doses was reduced for two periods of 8 weeks after the third injection. **RESULTS:** The cohort included a total of 290 patients of which 135 patients were initiated with infliximab and 155 with adalimumab. The mean age was 42.2 years (SD=16.9). After 12 months, 14.2%(22/155) of patients with adalimumab and 22.2%(30/135) of patients with infliximab had experienced a dose increase (p<0.05). Average medication costs in the year following initiation of adalimumab or infliximab, for patients who did not adjust doses were CAD$10,250 and CAD$14,957, respectively (p<0.01). For patients who experienced a dose increase or reduced interval between doses, average medication costs were CAD$19,789 with adalimumab and CAD$25,550 with infliximab (p=0.013). **CONCLUSIONS:** CD patients treated with infliximab had a significantly higher rate of dose increases compared with patients treated with adalimumab. Results of this RAMQ database analysis illustrate that, in a real-world setting, dose increase or reduction of interval between doses are associated with increased treatment costs. In both recommended and adjusted dosing, adalimumab demonstrated significant cost savings over infliximab.

PGI13

PERCEIVED VALUE ASSESSMENT OF ENTECAVIR VERSUS NO TREATMENT IN CHRONIC HEPATITIS B

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**OBJECTIVES:** To assess the economic value of treating CHB patients with Entecavir relative to the current situation in Russia with no treatment. **METHODS:** We carried out the Perceived Value Assessment (PVA) of Entecavir (937 patients) vs. no treatment (971 patients) using a multilayered Markovian model (disease state transition model: F0/F1 – F2/F3/F4 (Fibrosis) – >F4 (Advanced Fibrosis/Cirrhosis) – Decompensated Cirrhosis – Hepatocellular Carcinoma – Liver Transplant – Post Liver Transplant), developed by J. Wells from Monitor Group. It is consistent with a cost-benefit analysis, where the clinical benefits of treatment with ETV (occurrence of histological improvement and CHB disease regression, avoidance of renal adverse events, avoidance of additional monitoring requirements) are expressed in monetary terms (Rubles). Costs of treating a chronic Hepatitis B patient per day avoided by 5 years of Entecavir treatment and 25 years of follow up (total 30 years) can be considered as benefits of treating. **RESULTS:** As patients progress into more advanced disease states their treatment becomes disproportionately more expensive: 420.7 USD for F0/F1, 1 935.2 USD for F2/F3/F4, 2 515.6 USD for >F4, 10 947.1 USD for Decompensated Cirrhosis, 4 549.9 USD for Hepatocellular Carcinoma, 10 092 USD for Liver Transplant, 49 613.6 USD for Post Liver Transplant. Costs of treating a CHB patient avoided by 5 years of Entecavir treatment and 25 years of follow up – 30.3 USD per day: 4.8 USD per day for F0/F1, F2/F3/F4 and >F4; 3.2 USD per day for Decompensated Cirrhosis; 0.6 USD per day for Hepatocellular Carcinoma; 0.45 USD per day for Liver Transplant; 21.25 USD per day for Post Liver Transplant. Cost of Entecavir treatment is 8.8 USD per day (29.1 % of total costs avoided per patient per day of Entecavir treatment). **CONCLUSIONS:** Entecavir represents a true "spend to save" strategy: cost of therapy is fully outweighed by the economic benefits of treatment.

PGI14

PERCEIVED VALUE ASSESSMENT OF ENTECAVIR VERSUS TENOFOVIR IN CHRONIC HEPATITIS B

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**OBJECTIVES:** Chronic hepatitis B (CHB) can lead to progressive liver disease, including cirrhosis, hepatocellular carcinoma and death. New options for long-term antiviral treatment decrease financial burden of CHB to the healthcare system and require physicians, payers and healthcare decision-makers to evaluate its economic value.To assess the economic value of treatment with Entecavir relative to treatment with Tenofovir in the Russian healthcare system. **METHODS:** We carried out the Perceived Value Assessment (PVA) of Entecavir (ETV) vs. Tenofovir (TFV) using multilayered Markovian model (disease state transition model: F0/F1 – F2/F3/F4 (Fibrosis) – >F4 (Advanced Fibrosis/Cirrhosis) – Decompensated Cirrhosis – Hepatocellular Carcinoma – Liver Transplant – Post Liver Transplant), developed by J.Wells from Monitor Group. In terms of PVA model we evaluated the comparative value provided to the health care system by Entecavir versus Tenofovir treatment (total of 30 years modeled) depending on duration of treatment and the follow-up period. The primary outcome measure of the model is the "Per pill Cost". **RESULTS:** As patients progress into more advanced disease states their treatment becomes disproportionately more expensive: 420.7 USD for F0/F1, 1 935.2 USD for F2/F3/F4, 2 515.6 USD for >F4, 10 947.1 USD for Decompensated Cirrhosis, 4 549.9 USD for Hepatocellular Carcinoma, 10 092 USD for Liver Transplant, 49 613.6 USD for Post Liver Transplant. ETV's price is only 0.11 greater than TFV's price. Value gap between ETV and TFV for 5 years of therapy with 25 years of follow-up period was 4.8 USD per pill. It was determined by the long-term efficacy of ETV. **CONCLUSIONS:** PVA Cost benefit simulation with 30 year time horizon and maximum treatment duration of 5 years demonstrated ETV's economic value was 4.8 USD greater than that of TFV.